Centre for Electromagnetic and Time Metrology takes IPG tunable 80W erbium fiber laser

IPG Laser GmbH, a division of IPG Photonics, specialist in high power fiber lasers and amplifiers, announced that it has shipped its first commercial, tunable 80W erbium fiber laser. The single-mode laser output can be tuned in the "eye-safe" region of 1550 to 1567 nm. The unit went to the Centre for Electromagnetic and Time Metrology at the National Physical Laboratory in the UK

Researchers at the NPL explained "this laser is being used to provide a unique calibration service to industry for traceable laser "free field" and "in fibre" power measurements, up to world-leading power levels of +47 dBm (50W)".

The complete unit with power supply is in a rack mount package, and requires no separate cooling. Output is via a fiber delivery fitted with a 5.0mm collimator and offers truly single mode, M2<1.05, beam. The output radiation is randomly polarised, with a nominal line width of 1.5 nm. In addition to wavelength tunability at the 80 W power level, the laser offers exceptional, better than 2% rms, long-term power stability, which is crucial for metrology applications.

"The system extended a unique line of high power erbium fiber lasers which IPG Laser introduced on the market in 1996 backed by 10W single mode source with a fixed wavelength" said CEO and founder of IPG Photonics Dr. Valentin Gapontsev. "Later, we raised the output power levels and reached 100W in single mode in 2001 and 300W in multimode in 2002. Narrow line width, high peak power pulsed and linearly polarised versions were also available from IPG at the 1550 nm wavelength. Before, the maximum power available from a tunable laser was 30W. Now, IPG has developed a perfect erbium amplifier with 80W of output power which opened the door for this achievement." (http://www.npl.co.uk).

Second sourcing strengthens for POP4

Emcore has subscribed to the Pluggable Optics 4-channel (POP4) multi-source agreement (MSA) and will offer a 4-channel parallel fiber optic transceiver module compliant with the POP4 MSA. This provides fiber optic vendors with common mechanical and optical specifications to manufacture 4-channel transceiver products with standard interfaces. Electrical interconnection is using the FCI 100-pin MEG-Array connector. Optical interface is based on the MTP/MPO fiber optic ribbon connector.

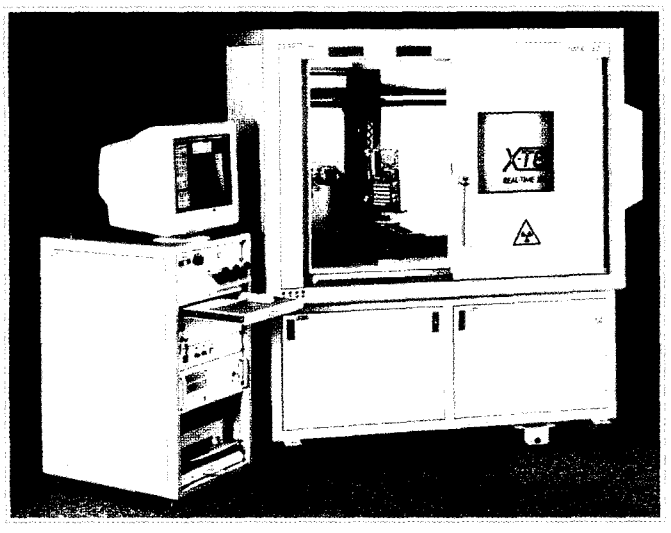
Transceiver modules conforming to the POP4 MSA offer 4-transmit/ 4-receive channels in a single, space-efficient, pluggable package. With each channel operating up to 2.7 Gb/s, POP4 transceivers provide an aggregate 10.8 Gb/s full-duplex bandwidth over conventional multimode fiber optic cable. Employing 850 nm (nanometer) VCSEL (vertical cavity surface emitting laser) technology, POP4 transceivers support transmission distances up to 300 meters over standard, 500 MHz.km. Co-authored originally by Agilent Technologies and Zarlink Semiconductor the POP4 MSA offers a flexible and reliable system design ensuring customers have access to multiple, reliable, sources for 4-channel transceiver modules, used for high-bandwidth optical interconnections in next-generation networking equipment, including switches and routers.

David Eastley, Agilent's parallel optics product manager said this reinforces POP4 as de-facto industry standard platform for 4-wide parallel optic transceiver modules. "Customers have a common transceiver format that can be truly second-sourced," he said.

Fraunhofer gets Advanced Computed Tomography

X-Tek Systems, manufacturers of real-time microfocus x-ray systems, has sold one of its latest HMX ST 225 x-ray inspection systems with advanced 3-D computed tomography capabilities to the Fraunhofer Institute of Manufacturing Engineering and Automation (IPA) in Stuttgart. Germany's organisation for applied research into a wide range of non-destructive testing (NDT) applications, Fraunhofer IPA serves the test and inspection needs of diverse industries from electronics and telecoms through to automotive and power tools.

HMX ST 225 x-ray inspection systems with advanced 3-D computed tomography capabilities



The purchase of X-Tek's HMX ST real-time microfocus x-ray inspection system along with X-Tek's proprietary Computed Tomography software will allow Fraunhofer IPA to successfully test and generate complex 3D images of microscopic electronic components as well complete assemblies, PCBs and even complete devices such as mobile phones. It will also be used to non-destructively test a wide range of high density metals and low density plastics, ceramics, glass-fibre and other composites.